

Site file

AUG 29 1989

Reply To  
Attn Of: HW-113

Dean Fowler, Project Manager  
Spokane County Utilities Dept.  
N. 811 Jefferson Street  
Spokane, Washington 99260-0180

Dear Mr. Fowler:

The U.S. Environmental Protection Agency (EPA) reviewed the "Draft Phase I Groundwater Monitoring Well Construction Plan" for the Colbert Landfill Remedial Design/Remedial Action. Although there are no comments that require changes be made in the above plan, there are several comments which have been discussed with your contractor, Landau and Associates, which we feel need to have written responses.

The following comments are those which require a written response:

A. South System (Section 2.1.1)

A search for additional private well logs should be undertaken during Phase I. More well logs from south and southeast of the landfill are necessary for defining the pertinent geology, such as the thickness of Unit A and the slope and thickness of Unit B. This information would aid in determining the potential leakage into the lower aquifers and is important for locating Phase I monitoring wells now that the plume has migrated in a southeasterly direction.

B. West System (Section 2.1.2)

1. According to figure GM-1.4, contamination in Unit C has migrated to wells near the Little Spokane River. As a result, private wells on both sides of the river should be examined. Sampling a few wells west of the river is advisable to establish the fact that contamination has not reached this area.

2. The determination of screened intervals should be based on the geology within the lower aquifer, on the amount of contamination detected while drilling, and on professional judgement. Using the thickness of Unit C (p. GM-2-9) as a guide to screen placement should be the last resort.

C. East System (Section 2.1.3)

The determination of the number of wells to place in each monitoring cluster and the choice of the screened intervals in these wells could be aided by field screening with an OVA during cable tool drilling of the deepest monitoring well (p. GM-2-13).

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## D. Monitoring Well Construction (Section 2.0)

1. Sampling Interval in West System. For the first well in each cluster, the number of driven samples needs to be increased from one driven sample every 20 feet to one every 5 feet. This is important for characterizing heterogeneity in the lower sand/gravel aquifer and determining the screen locations.

## 2. Anticipated Screen Length

Screens that are 20 feet in length will cause dilution of samples. Since the purpose of these monitor wells is to define the plume and determine the depths and concentrations that contaminants have reached, smaller screens (a maximum of 10 feet) should be considered.

## E. Well Installation (Section 2.2)

Centralizers - Since proper alignment of the wells is of concerns, the use of more than two centralizers, located above and below the screen, (p. GM-2-14) is important. Centralizers should be spaced at regular intervals in both shallow and deep wells.

## F. Monitoring Well Development (Section 3.0)

There are many disadvantages associated with air lift development when sampling for VOCs. Justification for the use of air lift over pump and surge needs to be provided. With air lift, the introduction of air into the filter pack and formation can potentially bias samples, and the application of high pressure air can damage the formation and filter pack. The time period between development and sampling should be specified and its importance because of the residual effects of air lift development on the filter pack and formation.

## G. Sampling Interval

In addition to the specified interval sampling, driven samples should be collected at formation changes, and continuous sampling would be prudent in areas where VOC concentrations are encountered with field screening.

If you have any questions about the response to these comments, please call (206-442-7177).

Sincerely,

*Neil E. Thompson*  
Neil E. Thompson  
Project Manager

cc: Mike Blum, Ecology

## CONCURRENCES

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SURNAME								
DATE								